

What is claimed is :

1. An electropolishing process means for inner and outer surfaces of a metal comprising:

an electrode device having a positive electrode guide, a negative electrode guide, a positive electrode plate, a negative electrode plate and a negative working piece, the positive electrode guide connecting to the positive electrode plate for offering a negative power source, the negative electrode guide connecting to the negative working piece via the negative electrode plate for offering a negative power source;

10 an insulated structure having an upper insulated cover and an lower insulated cover, positive electrode plate being between the upper insulated cover and the lower insulated cover, bottom of lower insulated cover being negative electrode plate;

15 a clamping apparatus getting upper insulated cover, lower insulated cover, positive electrode plate and negative electrode plate together.

2. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein an end of negative electrode plate is set an electrode hole for positioning negative working electrode.

20 3. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein upper insulated cover and lower insulated cover have one straight hole per each, the two straight holes and the electrode hole of negative electrode plate are concentric.

25 4. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein clamping apparatus uses an insulated screw to combine upper insulated cover, lower insulated cover, positive electrode plate and negative electrode plate.

30 5. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein negative working electrode is installed in the two straight holes of upper insulated cover and lower insulated cover and electrode hole of negative electrode plate.

6. The electropolishing process means for inner and outer surfaces of a

metal as cited in claim 1, wherein an end of positive electrode plate is installed a fastening workpiece apparatus for positioning a workpiece in a second workpiece hole.

5 7. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 6, wherein the fastening workpiece apparatus adopts a clamping method to fasten workpiece.

10 8. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein a positive electrode comprises positive electrode plate, positive electrode guide and workpiece.

15 9. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein a negative electrode comprises negative electrode plate, negative electrode guide and negative working electrode.

20 10. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 3, wherein bottom of the straight hole of lower insulated cover is smaller diameter for preventing electric field affection, and avoiding bottom of workpiece being electrolyzed and polished.

25 11. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein workpiece on upper insulated cover is added a guard for preventing electric field affection, and avoiding top of workpiece being electrolyzed and polished.

12. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein the means is put in an electrolytic tank for electropolishing process reaction.

25 13. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 12, wherein the electrolytic tank has a heater and a meshed plate; heater is to heat and also has thermal insulation function, the meshed plate is to averagely distribute electrolyte flow from bottom to upper place of tank.

30 14. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 12, wherein the electrolytic tank has a partition, electrolyte overflows to a temporary electrolyte storing area when

electrolyte amount is more than tank capacity.

15. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 12, wherein a pump cooperate with a pipe to recycle electrolyte, which is pumped out and in from electrolytic tank bottom.

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16. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 15, wherein the pump is made of anti-acid material.

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17. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 1, wherein an over-hanging beam and a revolving stage connect the means.

18. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 17, wherein the revolving stage has a plurality of tanks.

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19. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 18, wherein the plural tanks include plural electrolytic polishing tanks, plural water rinse tanks, one nitric acid rinse tank, one deionization hot water rinse tank and one drying tank.

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20. The electropolishing process means for inner and outer surfaces of a metal as cited in claim 17, wherein the over-hanging beam is a cam mechanism to shake for reducing air bulbs when reaction being proceeded.